

SEQUENCE LISTING

<110> Conrad, Bernard
Mach, Bernard

<120> Methods for Diagnosis and Therapy of Autoimmune
Disease, Such As Insulin Dependent Diabetes Mellitus,
Involving Retroviral Superantigens

<130> 23132-502

<140> 09/490,700

<141> 2000-01-24

<150> PCT/EP98/04926

<151> 1998-07-22

<150> 97112482.1

<151> 1997-07-22

<150> 97401773.3

<151> 1997-07-23

<160> 49

<170> PatentIn Ver. 2.1

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<220>

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atccaacaac catgatggag

20

<210> 3

<211> 21

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tctcgtaagg tgcaaatgaa g

21

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ctttacaaag cagtattgct gc 22

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<400> 6
aacactgcga aaggccgcag g 21

<210> 7
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<400> 7
aggtattgtc caaggtttct cc 22

<210> 8
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<400> 8
yaaatggmgw aygytaacag act 23

<210> 9
<211> 23
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<220>
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yaaatggmgw aygytaactg act 23

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<220>
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<210> 11
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<220>
<223> Description of Artificial Sequence: primer

<400> 11
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<210> 12
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<212> DNA
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<220>
<223> Description of Artificial Sequence: primer

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tgcgccagca atgtatccat g 21

<210> 13
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<212> DNA
<213> Artificial Sequence

<220>
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<400> 13
gggtggcagt gcatcatagg t 21

<210> 14
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 14
gggagagggt cagcagcaga ca 22

<210> 15
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 15
gacagcaagc cagtgataag ca 22

<210> 16
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 16
ggaacaggga ctctctgca 19

<210> 17
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
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<400> 17
gggaagggtg aggaagtgtg 20

<210> 18
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 18
ggtgtttctc ctgaggag 19

<210> 19

<211> 21
<212> DNA
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<220>
<223> Description of Artificial Sequence: primer

<400> 19
gaagaatggc caacagaagc t

21

<210> 20
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<220>
<223> Description of Artificial Sequence: primer

<400> 20
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<210> 21
<211> 39
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<220>
<223> Description of Artificial Sequence: primer'

<400> 21
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39

<210> 22
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<212> DNA
<213> Artificial Sequence

<220>
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<400> 22
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21

<210> 23
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<220>
<223> Description of Artificial Sequence: primer'

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22

<210> 24
<211> 21

<212> DNA
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<210> 25
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<210> 26
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<210> 27
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 <400> 27
 aggtattgtc caaggtttct cc 22

<210> 28
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 cttacaaag cagtattgct gc 22

<210> 29
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~~Q1~~

C1

<213> Artificial Sequence

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<223> Description of Artificial Sequence: primer

<400> 29

gtaaaggatc aagtgctgtg c

21

<210> 30

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 30

gactaagctt aagaacccat cagagatgc

29

<210> 31

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 31

agactggatc cgttaagtcg ctatcgacag c

31

<210> 32

<211> 208

<212> DNA

<213> retroviral provirus

<400> 32

catctccctc aggagaaaca cccacgaatg atcaataaat actaagggga ctcagaggct 60
ggtgggatcc tccatatgct gaacgttggt tcccggggcc cccttatttc tttctctata 120
ctttgtctct gtgtcttttt cttttccaag tcttcttcat ttgcacctta cgagaaacat 180
ctccatcatg gttgttggat gggggcaa 208

<210> 33

<211> 1060

<212> DNA

<213> retroviral provirus

<400> 33

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gttactgtgt ctgtatagaa agaagtagac ataggagact ccattttggt ctgtactaag 180
aaaaattctt ctgccttgag atgctgttaa tctatgacct tacccecaac cccgtgctct 240
ctgaaacatg tgccgtgtca aactcagggt taaatggatt aagggtggtg caagatgtgc 300
tttgttaaag agatgcttga aggcagcatg ctcattaaga gtcacacca ctccctaata 360
tcaagtaccc agggacacaa aactgcgaa aggccgcagg gacctctgcc taggaaagcc 420
aggtattgtc caaggtttct ccccatgtga tagtctgaaa tatggcctcg tgggaaggga 480
aagacctgac catccccag accaacaccc gtaaagggtc tgtgctgagg aggattagta 540
taagaggaaa gcatgcctct tgcagttgag agaagaggaa gacatctgtc tctgccccat 600

GT
C1

cccctgggca	atggaatgtc	tcagtataaa	acccgattga	acattccatc	tactgagata	660
gggaaaaact	gccttagggc	tggaggtggg	acatgtgggc	agcaatactg	ctttgtaaag	720
cattgagatg	tttatgtgta	tgtatatcta	aaagcacagc	acttgatcct	ttacctgtgc	780
tatgatgcaa	acacctttgt	tcacgtgttt	gtctgctgac	cctctcccca	ctattgtctt	840
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gactcagagg	ctggtgggat	cctccatatt	ctgaacgttg	gttcccgggg	cccccttatt	960
tctttctcta	tactttgtct	ctgtgtcttt	ttcttttcca	agtcttcttc	atttgcacct	1020
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<210> 34
 <211> 1754
 <212> DNA
 <213> Human endogenous retrovirus

<400> 34		
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ataaatatth	ccattgggta tcattatcct cctatttgcc tagggagagc accaggatgt 180	
ttaatgcctg	cagtcacaaa ttggttggtg gaagtaccta ctgtcagtcg taacagtaga 240	
ttcactttat	acatggtaag cgggatgtca ctcaggccac gggtaaatta ttacaagac 300	
ttttctttat	aaagatcatt aaaatttaga cctaaaggga aaacttgccc caaggaaatt 360	
cctaaaggat	caaagaatac agaagtttta gtttggaag aatgtgtggc caatagtgtg 420	
gtgatattac	aaaacaatga attcggaact attatagatt aggcacctcg aggtcaattc 480	
taccacaatt	gctcaggaca aactcagtcg tgtccaagtg cacaagttag tccagctgtc 540	
gatagcgact	taacagaaaag tctagacaaa cataagcata aaaaattaca gtctttctac 600	
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tggtctggaa	atcaaacctt agaaacaaga tatcgtaagc cattttatac tatcgacctg 780	
aattccattc	taacggttcc tttaaaaagt tgctaaagc ccccttatat gctagtgtg 840	
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gcagtgatta	tgggattaat tgcagtcaca gctacggctg ctgtggcagg ggttgcattg 1140	
cactcttctg	ttcagtcagt aaactttggt aattattggc aaaagaattc tacaagattg 1200	
tggaaattac	aattctagtat tgatcaaaaa ttggcaagtc aaattaatga tcttagacaa 1260	
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tggaaatcgt	cagattttttg tattacaccc caaatttata atgagtctga gcatcactgg 1380	
gacatgggta	gacgccatct acagggaaga gaagataatc tcactttaga catttccaaa 1440	
ttaaaagaac	aaattttcga agcatcaaaa gccattttaa atttgggtgcc aggaactgag 1500	
gcaattgcag	gagttgctga tggcctcgca aatcttaacc ctgtcacttg gattaagacc 1560	
atcagaagta	ctatgattat aaatctcata ttaatcgttg tgtgctgtt ttgtctgttg 1620	
ttagtctgca	ggtgtacccc aacagctccg aaaaaaacag tgacatcgag aacgggccat 1680	
gaatgacaaa	ggcgggtttt gttccaaaaa aaaaaggggg aaattttggg gaaaaccaa 1740	
aaaatgaaaa	tggt	1754

<210> 35
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 <212> DNA
 <213> Human endogenous retrovirus

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ggtacctggc	cccacagatg atcgctgccc tgccaaacct gaggaagaag ggatgatgat 180
aaatattttc	attgggtatc attatcctcc tattttgcta gggagagcac caggatgttt 240
aatgcctgca	gtccaaaatt ggttggtaga agtacctact gtcagtccta acagtagatt 300
cacttatcac	atggttaagcg ggatgtcact caggccacgg gtaaattatt tacaagactt 360
ttcttatcaa	agatcattaa aatttagacc taaagggaaa acttgcccca aggaatttc 420

C1



taaaggatca aagaatacag aagtttttagt ttgggaagaa tgtgtggcca atagtgtggt 480
gatattacaa aacaatgaat tcggaactat tatagattag 520

<210> 36
<211> 153
<212> PRT
<213> Human endogenous retrovirus

<400> 36
Met Val Thr Pro Val Thr Trp Met Asp Asn Pro Ile Glu Val Tyr Val
1 5 10 15
Asn Asp Ser Val Trp Val Pro Gly Pro Thr Asp Asp Arg Cys Pro Ala
20 25 30
Lys Pro Glu Glu Glu Gly Met Met Ile Asn Ile Ser Ile Gly Tyr His
35 40 45
Tyr Pro Pro Ile Cys Leu Gly Arg Ala Pro Gly Cys Leu Met Pro Ala
50 55 60
Val Gln Asn Trp Leu Val Glu Val Pro Thr Val Ser Pro Asn Ser Arg
65 70 75 80
Phe Thr Tyr His Met Val Ser Gly Met Ser Leu Arg Pro Arg Val Asn
85 90 95
Tyr Leu Gln Asp Phe Ser Tyr Gln Arg Ser Leu Lys Phe Arg Pro Lys
100 105 110
Gly Lys Thr Cys Pro Lys Glu Ile Pro Lys Gly Ser Lys Asn Thr Glu
115 120 125
Val Leu Val Trp Glu Glu Cys Val Ala Asn Ser Val Val Ile Leu Gln
130 135 140
Asn Asn Glu Phe Gly Thr Ile Ile Asp
145 150

<210> 37
<211> 603
<212> DNA
<213> Human endogenous retrovirus

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ggtacctggc cccacagatg atcgctgccc tgccaaacct gaggaagaag ggatgatgat 180
aaatatttcc attgggtatc attatcctcc tatttgccca gggagagcac caggatgttt 240
aatgcctgca gtccaaaatt ggttggtaga agtacctact gtcagtccta acagtagatt 300
cacttatcac atggtaagcg ggatgtcact caggccacgg gtaaattatt tacaagactt 360
ttcttatcaa agatcattaa aatttagacc taaagggaag acttgcccca aggaaattcc 420
taaaggatca aagaatacag aagtttttagt ttgggaagaa tgtgtggcca atagtgtggt 480
gatattacaa aacaatgaat tcggaactat tatagattag gcacctcgag gtcaattcta 540
ccacaattgc tcaggacaaa ctcagtcgtg tccaagtgca caagtgagtc cagctgtcga 600
tag 603

<210> 38

<211> 561
<212> PRT
<213> Human endogenous retrovirus

<220>
<221> VARIANT
<222> (154)
<223> Wherein Xaa at position 154 is "Z" as described in
the figure legend for FIG. 7F.

<400> 38

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20 25 30
Lys Pro Glu Glu Gly Met Met Ile Asn Ile Ser Ile Gly Tyr His
35 40 45
Tyr Pro Pro Ile Cys Leu Gly Arg Ala Pro Gly Cys Leu Met Pro Ala
50 55 60
Val Gln Asn Trp Leu Val Glu Val Pro Thr Val Ser Pro Asn Ser Arg
65 70 75 80
Phe Thr Tyr His Met Val Ser Gly Met Ser Leu Arg Pro Arg Val Asn
85 90 95
Tyr Leu Gln Asp Phe Ser Tyr Gln Arg Ser Leu Lys Phe Arg Pro Lys
100 105 110
Gly Lys Thr Cys Pro Lys Glu Ile Pro Lys Gly Ser Lys Asn Thr Glu
115 120 125
Val Leu Val Trp Glu Glu Cys Val Ala Asn Ser Val Val Ile Leu Gln
130 135 140
Asn Asn Glu Phe Gly Thr Ile Ile Asp Xaa Ala Pro Arg Gly Gln Phe
145 150 155 160
Tyr His Asn Cys Ser Gly Gln Thr Gln Ser Cys Pro Ser Ala Gln Val
165 170 175
Ser Pro Ala Val Asp Ser Asp Leu Thr Glu Ser Leu Asp Lys His Lys
180 185 190
His Lys Lys Leu Gln Ser Phe Tyr Leu Trp Glu Trp Glu Glu Lys Gly
195 200 205
Ile Ser Thr Pro Arg Pro Lys Ile Ile Ser Pro Val Ser Gly Pro Glu
210 215 220
His Pro Glu Leu Trp Arg Leu Thr Val Ala Ser His His Ile Arg Ile
225 230 235 240
Trp Ser Gly Asn Gln Thr Leu Glu Thr Arg Tyr Arg Lys Pro Phe Tyr
245 250 255
Thr Ile Asp Leu Asn Ser Ile Leu Thr Val Pro Leu Gln Ser Cys Leu
260 265 270

Lys Pro Pro Tyr Met Leu Val Val Gly Asn Ile Val Ile Lys Pro Ala
 275 280 285
 Ser Gln Thr Ile Thr Cys Glu Asn Cys Arg Leu Phe Thr Cys Ile Asp
 290 295 300
 Ser Thr Phe Asn Trp Gln His Arg Ile Leu Leu Val Arg Ala Arg Glu
 305 310 315 320
 Gly Met Trp Ile Pro Val Ser Thr Asp Arg Pro Trp Glu Ala Ser Pro
 325 330 335
 Ser Ile His Ile Leu Thr Glu Ile Leu Lys Gly Val Leu Asn Arg Ser
 340 345 350
 Lys Arg Phe Ile Phe Thr Leu Ile Ala Val Ile Met Gly Leu Ile Ala
 355 360 365
 Val Thr Ala Thr Ala Ala Val Ala Gly Val Ala Leu His Ser Ser Val
 370 375 380
 Gln Ser Val Asn Phe Val Asn Tyr Trp Gln Lys Asn Ser Thr Arg Leu
 385 390 395 400
 Trp Asn Ser Gln Ser Ser Ile Asp Gln Lys Leu Ala Ser Gln Ile Asn
 405 410 415
 Asp Leu Arg Gln Thr Val Ile Trp Met Gly Asp Arg Leu Asp Leu Glu
 420 425 430
 His His Phe Gln Leu Gln Cys Asp Trp Asn Thr Ser Asp Phe Cys Ile
 435 440 445
 Thr Pro Gln Ile Tyr Asn Glu Ser Glu His His Trp Asp Met Val Arg
 450 455 460
 Arg His Leu Gln Gly Arg Glu Asp Asn Leu Thr Leu Asp Ile Ser Lys
 465 470 475 480
 Leu Lys Glu Gln Ile Phe Glu Ala Ser Lys Ala His Leu Asn Leu Val
 485 490 495
 Pro Gly Thr Glu Ala Ile Ala Gly Val Ala Asp Gly Leu Ala Asn Leu
 500 505 510
 Asn Pro Val Thr Trp Ile Lys Thr Ile Arg Ser Thr Met Ile Ile Asn
 515 520 525
 Leu Ile Leu Ile Val Val Cys Leu Phe Cys Leu Leu Leu Val Cys Arg
 530 535 540
 Cys Thr Pro Thr Ala Pro Lys Lys Thr Val Thr Ser Arg Thr Gly His
 545 550 555 560
 Glu

<210> 39
 <211> 604

<212> DNA

<213> Human endogenous retrovirus

<400> 39

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ggtacctggc cccacagatg atcgctgccc tgccaaacct gaggaagaag ggatgatgat 180
aaatattttcc attgggtatc attatcctcc tatttgccta gggagagcac caggatgttt 240
aatgcctgca gtccaaaatt ggttggtaga agtacctact gtcagtccta acagtagatt 300
cacttatcac atggtaagcg ggatgtcact caggccacgg gtaaattatt tacaagactt 360
ttcttatcaa agatcattaa aatttagacc taaagggaaa acttgcccca aggaaattcc 420
taaaggatca aagaatacag aagttttagt ttgggaagaa tgtgtggcca atagtgtggt 480
gatattacaa aacaatgaat tcggaactat tatagattta ggcacctcga ggtcaattct 540
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atag 604
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<210> 40

<211> 181

<212> PRT

<213> Human endogenous retrovirus

<400> 40

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Asn Asp Ser Val Trp Val Pro Gly Pro Thr Asp Asp Arg Cys Pro Ala
      20              25              30

Lys Pro Glu Glu Glu Gly Met Met Ile Asn Ile Ser Ile Gly Tyr His
      35              40              45

Tyr Pro Pro Ile Cys Leu Gly Arg Ala Pro Gly Cys Leu Met Pro Ala
      50              55              60

Val Gln Asn Trp Leu Val Glu Val Pro Thr Val Ser Pro Asn Ser Arg
      65              70              75              80

Phe Thr Tyr His Met Val Ser Gly Met Ser Leu Arg Pro Arg Val Asn
      85              90              95

Tyr Leu Gln Asp Phe Ser Tyr Gln Arg Ser Leu Lys Phe Arg Pro Lys
      100             105             110

Gly Lys Thr Cys Pro Lys Glu Ile Pro Lys Gly Ser Lys Asn Thr Glu
      115             120             125

Val Leu Val Trp Glu Glu Cys Val Ala Asn Ser Val Val Ile Leu Gln
      130             135             140

Asn Asn Glu Phe Gly Thr Ile Ile Asp Leu Gly Thr Ser Arg Ser Ile
      145             150             155             160

Leu Pro Gln Leu Leu Arg Thr Asn Ser Val Val Ser Lys Cys Thr Ser
      165             170             175

Glu Ser Ser Cys Arg
      180
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<210> 41

<211> 182
<212> PRT
<213> Human endogenous retrovirus

<400> 41
Phe Thr Ile Pro Leu Ala Glu Gln Asp Cys Glu Lys Phe Ala Phe Thr
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Ile Pro Ala Ile Asn Asn Lys Glu Pro Ala Thr Arg Phe Gln Trp Lys
20 25 30
Val Leu Pro Gln Gly Met Leu Asn Ser Pro Thr Ile Cys Gln Thr Phe
35 40 45
Val Gly Arg Ala Leu Gln Pro Val Arg Asp Lys Phe Ser Asp Cys Tyr
50 55 60
Ile Ile His Tyr Phe Asp Asp Ile Leu Cys Ala Ala Glu Thr Lys Asp
65 70 75 80
Lys Leu Ile Asp Cys Tyr Thr Phe Leu Pro Ala Glu Val Ala Asn Ala
85 90 95
Gly Leu Ala Ile Ala Ser Asp Lys Ile Gln Thr Ser Thr Pro Phe His
100 105 110
Tyr Leu Gly Met Gln Ile Glu Asn Arg Lys Ile Lys Pro Gln Lys Ile
115 120 125
Glu Ile Arg Lys Asp Thr Leu Lys Thr Leu Asn Asp Phe Gln Lys Leu
130 135 140
Leu Gly Asp Ile Asn Trp Ile Arg Pro Thr Leu Gly Ile Pro Thr Tyr
145 150 155 160
Ala Met Ser Asn Leu Phe Ser Ile Leu Arg Gly Asp Ser Asp Leu Asn
165 170 175
Ser Lys Arg Met Leu Thr
180

<210> 42
<211> 250
<212> DNA
<213> Human endogenous retrovirus

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agcctccatt ttgcaactgg tcccctggct cccaccttta tgaactctta acctgtcttt 180
tctcattcct ttgtcaccat tggactttgg gtaccctacg ggtggtgttg aggctgtcac 240
cgcacattaa 250

<210> 43
<211> 203
<212> DNA
<213> Human endogenous retrovirus

<400> 43

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 ctccacacct ctatatctct gtgtgtgtgt ctttaattcc tccagtgttg ctgggttagg 180
 gtctcctcga cgagctgtcg tgc 203

<210> 44
 <211> 283
 <212> DNA
 <213> Human endogenous retrovirus

<400> 44
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 cagagaactc tggccttgca gagagtcctt gttcccactt cactttcctt ttcaccaaatt 180
 aaaaccctgc tttcactcat gcatcaaatt gtctgtgagc ctacattttt gtggccatgg 240
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<210> 45
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 <212> DNA
 <213> Human endogenous retrovirus

<400> 45
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 tgggtggtagt ggtatcccct agggcccagc tgtcttttct tttatctctt tgtcttgtgt 180
 ctttatttct atgagtctct cgtctccgca catggggaga aaaaccata gaccctgtag 240
 ggctg 245

<210> 46
 <211> 181
 <212> DNA
 <213> Human endogenous retrovirus

<400> 46
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<210> 47
 <211> 287
 <212> DNA
 <213> Human endogenous retrovirus

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<210> 48
 <211> 264
 <212> DNA
 <213> Human endogenous retrovirus

C
b

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ccatatgctg aacgctggtt gccccgggtc cccttcttct tttctctata ctttgtctct 180
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<210> 49
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 49
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BT
cancel